

CLAIMS

What is claimed is:

1. A restraint system for restraining a person in a vehicle of transportation, comprising:

a safety harness having length adjustable shoulder belts and a buckle for connecting the shoulder belt on a chest-side of a person;

a stiff U-shaped shoulder yoke having legs, which are contoured to a torso of the person, and a high collar interconnecting the legs; and

fastening means for securing the shoulder belts behind the collar,

wherein the legs of the shoulder yoke have a side in confronting relationship to a side of the shoulder belts, with the confronting sides formed, at least partially, with an interacting engagement structure which is configured to increase friction as the shoulder belts move in relation to the legs in longitudinal direction, while inhibiting a displacement of the shoulder belts in relation to the legs in transverse direction.
2. The restraint system of claim 1, wherein one of the sides is a topside of the legs of the shoulder yoke, and the other one of the sides is an underside of the shoulder belts.

3. The restraint system of claim 1, wherein the engagement structure includes a longitude bead formed on one of the sides, and a longitude groove formed on the other one of the sides and having a configuration suited to a cross section of the longitude bead.
4. The restraint system of claim 2, wherein the engagement structure includes a shallow strip embedded in a channel-shaped depression of the topside of the legs of the shoulder yoke and formed with longitude beads in parallel relationship and longitude grooves in neighboring relationship for interaction with complementary opposite longitude grooves and longitude beads in neighboring relationship formed on the underside of the shoulder belts.
5. The restraint system of claim 4, wherein the longitude beads of the shallow strip and the underside of the shoulder belts have an arched cross section, and the longitude grooves of the shallow strip and the underside of the shoulder belts have a trough-shaped cross section

6. The restraint system of claim 4, wherein the shallow strip defines a plane, said longitude beads and said longitude grooves of the shallow strip and the underside of the shoulder belts having a triangular cross section defined by a first surface extending at an inclination to the plane and a second surface extending at a right angle to the plane, with the second surface of the longitude beads of the legs of the shoulder yoke directed frontally to a vertical longitudinal center axis defined between the legs of the shoulder yoke.
7. The restraint system of claim 2, wherein the engagement structure includes a shallow strip embedded in a channel-shaped depression of the topside of the legs of the shoulder yoke and formed with a central longitude groove, and a longitude bead formed on the underside of the shoulder belt and having a configuration complementing a configuration of the longitude bead.
8. The restraint system of claim 2, wherein the engagement structure includes a shallow strip embedded in a channel-shaped depression of the topside of the legs of the shoulder yoke and formed with a central longitude bead of omega-shaped configuration, and a triangular strip on the underside of the shoulder belts and formed with a central longitude groove having a configuration complementing a configuration of the longitude bead.

9. The restraint system of claim 2, wherein the engagement structure includes fibers adhering through flocking on the topside of the shoulder yoke and on the underside of the legs of the shoulder belts, said fibers of the legs extending at an inclination in the direction of the buckle of the safety harness and a vertical longitudinal center axis of the shoulder yoke, and said fibers of the shoulder belts extending at an inclination in opposite direction.
10. The restraint system of claim 9, wherein the engagement structure includes a shallow strip embedded in a channel-shaped depression of the topside of the legs of the shoulder yoke, said fibers of the legs being provided on the shallow strip.

11. The restraint system of claim 1, wherein the engagement structure includes plural of said longitude bead and plural of said longitude groove in longitudinal direction of the legs and the shoulder belts in partially offset relationship, with a first plurality of longitude beads and longitude grooves on a free end of the legs extending in substantial parallel relationship to a vertical longitudinal center axis of the shoulder yoke, and with a second plurality of longitude beads and longitude grooves on a junction from the legs to the collar extending in substantial parallel relationship to the legs, whereas a third plurality of longitude beads and longitude grooves of the shoulder belts adjacent to the collar extends in parallel relationship to the shoulder belts, and whereas a fourth plurality of longitude beads and longitude grooves of the shoulder belts adjacent to the free end of the legs extends at an angle to the longitudinal direction of the shoulder belts.
12. The restraint system of claim 11, wherein the engagement structure are so constructed that a length of an engagement structure component on the shoulder belts is shorter than a length of an engagement structure component on the legs.
13. The restraint system of claim 11, wherein the engagement structure component on the shoulder belts has a sloped end portion.

14. The restraint system of claim 1, wherein the engagement structure includes extruded sections formed on the legs and made of rubber or plastic.
15. The restraint system of claim 1, wherein the engagement structure includes molded-on plastic on the shoulder belts.
16. The restraint system of claim 1, wherein the engagement structure includes profiled strands sewn to the shoulder belts.
17. The restraint system of claim 1, wherein the engagement structure includes profiled strands glued to the shoulder belts.